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RYAN, MASON & LEWIS, LLP
1300 POST ROAD
SUITE 205
FAIRFIELD, CT 06824

EXAMINER
STOKELY-COLLINS, JASMINE N

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 July 2008</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-43</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-43</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 14, 24 and 37 have been
considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Petersen in view of Petersen does not teach the first data
being without any data overhead portion associated with the first data within the
information section. The examiner agrees and introduces US Patent 6,442,147 B1 to
Mauger et al.

Mauger teaches the known technique of header suppression, in which headers
are removed where they are not required (col. 9 ll. 57-62). In the case of the system
taught by the Petersen patents, the minicell headers define transmission priority, length,
and relative position (Petersen '051 col. 6 ll. 50-54). This information is no longer
needed once the system decides how to pack each ATM cell, and can be removed.
The CID, which may define a specific telephone call. For ATM cells containing data for
the same call/session, the CID would be redundant and could be indicated by the ATM
cell.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 4-6, 24, and 27-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Petersen et al (US 5,802,051) in view of Petersen et al (US

5,809,023), and further in view of Mauger et al (US 6,442,147 B1).

        Regarding claim 1, Petersen (US 5,802,051) teaches a system for

communicating data to a location through a communications network,

comprising:

a data object (figure 9 element 940: ATM cell, column 1 lines 47-50) for

transporting a first data (minicell); and

a mechanism for identifying first data, which is accorded a higher priority than

second data to be processed in the location (column 5 lines 26-56).

        Petersen (US 5,802,051) does not provide sufficient details about the

assembly of the minicells into an ATM cell, the structure of the ATM cell, or

transmission of the ATM cell, and therefore does not explicitly teach the data

object (ATM cell) "being generated in response to an identification of the first

data, the data object having:

a predetermined data transport capacity,

a header, and

an information section,

the first data being contained in the information section of the data object without

any data overhead portion associated with the first data in the information

section;

a device for determining whether the predetermined data transport capacity

exceeds the size of the first data by at least a threshold, at least some of a

second data being inserted into the information section of the data object when it

is determined that the predetermined transport capacity exceeds the size of the

first data by at least the threshold; and

an interface for providing the data object to the location"

Petersen (US 5,809,023) elaborates on the process after segmenting data into

minicells, and teaches the data object (ATM cell) being generated in response to

an identification of the first data (column 5 lines 11-15 and column 5 lines 35-41,

where the ATM cell is constructed and then completed with a header based on

the arrival of minicells), the data object having:

a predetermined data transport capacity (column 1 lines 26-29),

a header (column 5 lines 37-41), and

an information section (payload, column 5 lines 37-41),

the first data being contained in the information section of the data object without

any data overhead portion associated with the first data in the information section

(it is inherent that the ATM cell carries entire minicells of data in it's payload

without splitting the minicell between two different ATM cells);

a device for determining whether the predetermined data transport capacity

exceeds the size of the first data by at least a threshold (figure 5 element 530), at

least some of a second data (the next minicell received after the first minicell)

being inserted into the information section of the data object when it is

determined that the predetermined transport capacity exceeds the size of the first

data by at least the threshold (column 5 lines 10-18); and

an interface for providing the data object to the location (column 5 lines 37-41).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Petersen (US 5,802,051) and

Petersen (US 5,809,023) for the benefit of efficiently using bandwidth to transmit

ATM cells (US 5,809,023 column 3 lines 45-49).

Petersen in view of Petersen does not teach the first data being without

any data overhead portion associated with the first data within the information

section.

Mauger teaches the known technique of header suppression, in which

headers are removed where they are not required (col. 9 ll. 57-62). It would have

been obvious to one of ordinary skill in the art at the time the invention was made

to remove any unnecessary or redundant header information for the benefit of

efficiently utilizing space in the ATM cell.

Regarding claim 4, Petersen (US 5,802,051) further teaches the data

object includes a data cell in an asynchronous transfer mode (ATM) format

(figure 9 element 940).

Regarding claim 5, when read in light of claim 1, Petersen (US 5,802,051) further teaches the data object includes a packet (minicell, column 1 lines 44-47).

Regarding claim 6, when read in light of claim 1, limitation "wherein the threshold has a zero value" is met by Petersen (5,809,023) column 5 lines 15-18 where Petersen adds data to the data object "until the payload of the current ATM cell is full", where one of ordinary skill in the art would understand full to mean there is no room left in the ATM cell (zero threshold).   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine incorporate Petersen's teaching of filling the entire ATM cell with data for the benefit of having a more efficient use of bandwidth.

Regarding claim 24, see analysis of claim 1.

Regarding claim 27, when read in light of claim 24, see analysis of claim 4.

Regarding claim 28, when read in light of claim 24, see analysis of claim 5.

Regarding claim 29, when read in light of claim 24, see analysis of claim 6.

4.   Claims 2-3, 9-12, 14-22, 25-26, 32-35, and 37-42 and are rejected under 35

U.S.C. 103(a) as being unpatentable over Petersen et al (US 5,802,051) in view of

Petersen et al (US 5,809,023) and Mauger et al (US 6,442,147 B1), and further in view

of White et al (US 6,392,664).

        Regarding claim 2, Petersen '051 in view of Petersen '023 and Mauger

teaches the system of claim 1.

        Petersen (US 5,802,051) in view of Petersen (US 5,809,023) does not

teach that the communications network includes a cable network.

        White teaches a cable television network (figure 1 element 16, column 3

lines 28-36) that transmits programming and interactive video in MPEG format. It

would have been obvious to one of ordinary skill in the art at the time the

invention was made to embody the system taught by Petersen in White's

interactive television network for the benefit of transmitting other types of content

that would be supported by the ATM cells taught in the Petersen patents.

Interactive television content is particularly advantageous, as it provides a vast

array of content (column 1 lines 25-41). Furthermore, White's system provides a

multiplicity of content simultaneously.

        Regarding claim 3, when read in light of claim 2, White further teaches the

location includes a headend (column 4 lines 59-63).

Regarding claim 9, when read in light of claim 1, White further teaches a processor for presenting an entertainment program (column 2 lines 53-59, column 3 lines 51-54), wherein the first data includes data representing a command for manipulation of a presentation of the entertainment program (column 4 lines 44-46, column 4 lines 59-63).

Regarding claim 10, when read in light of claim 9, White further teaches the presentation includes a video-on-demand (VOD) presentation (column 3 line 66-column 4 line 1).

Regarding claim 11, when read in light of claim 9, White further teaches the manipulation includes a selected one of a fast-forward, rewind, play and pause of the presentation (column 4 lines 44-46).

Regarding claim 12, when read in light of claim 1, White teaches a processor responsive to a user request for selectively presenting entertainment programming content (see analysis of claim 9), wherein the second data concerns selections of entertainment programming content presentations (column 7 lines 24-26 and column 9 lines 6-7, where in column 7 lines 27-30 White discloses that user preferences can be stored in the head-end).

Regarding claim 14, Petersen (US 5,802,051) teaches an apparatus comprising:

first data being accorded a higher priority than second data (column 3 lines 43-44) to be processed in a location remote from the apparatus (column 1 lines 47-54);

Petersen (US 5,802,051) discloses using ATM cells to ultimately transfer this data (figure 9 element 940), however does not go into detail about the construction of ATM cells.

Petersen (US 5,809,023) teaches a device for generating a data object (ATM cell) for transporting the first data (column 5 lines 11-15 and column 5 lines 35-41), the data object having a header (column 5 lines 37-41), and an information section (payload, column 5 lines 37-41), the first data (a first minicell) utilizing a portion of a data transport capacity of the information section in the data object, resulting in unused data transport capacity in the information section of the data object, the first data being contained in the information section of the data object without any data overhead portion (it is inherent that the ATM cell carries entire minicells of data in its payload without splitting the minicell between two different ATM cells, see figures 4 and 11 where no minicell occupies more than one cell), at least some of the second data being inserted in the information section of the data object to utilize the unused data transport capacity (column 5 lines 15-18); and

an interface for sending the data object to the remote location for processing

thereof (column 5 lines 35-41). It would have been obvious to one of ordinary

skill in the art at the time the invention was made to combine the teachings of

Petersen (US 5,802,051) and Petersen (US 5,809,023) for the benefit of

efficiently using bandwidth to transmit ATM cells (US 5,809,023 column 3 lines

45-49).

Petersen (US 5,802,051) in view of Petersen (US 5,809,023) does not

teach applying this functionality to an apparatus responsive to a command

initiated by a user to affect a presentation of an entertainment program, or first

and second data being part of an apparatus responsive to a command initiated

by a user to affect a presentation of a entertainment program.

Petersen in view of Petersen does not teach the first data being without

any data overhead portion associated with the first data within the information

section.

Mauger teaches the known technique of header suppression, in which

headers are removed where they are not required (col. 9 ll. 57-62). It would have

been obvious to one of ordinary skill in the art at the time the invention was made

to remove any unnecessary or redundant header information for the benefit of

efficiently utilizing space in the ATM cell.

White teaches an apparatus responsive to a command initiated by a user

to affect a presentation of a entertainment program (column 4 lines 59-63),

comprising:

a processor for generating first data for effecting the command (column 4 lines

59-63), and second data to be processed in a location remote from the apparatus (column 24-26, where column 7 lines 27-30 disclose that user preferences can be stored in the head-end). It would have been obvious to one of ordinary skill in the art to embody the functionality of Petersen's apparatus in White's interactive TV system for the benefit of providing an efficient transport mechanism for the different types of data being transmitted in White's system.

Regarding claim 15, when read in light of claim 14, limitation "set-top terminal" is met by White's WebTV terminal (column 2 lines 53-54), which is a functional equivalent to the claimed set-top terminal.

Regarding claim 16, White further teaches the remote location includes a headend in a broadband communications system (column 2 lines 17-21).

Regarding claim 17, when read in light of claim 16, White further teaches the broadband communications system includes a cable network (figure 3 element 60).

Regarding claim 18, when read in light of claim 14, see analysis of claim 4.

Regarding claim 19, when read in light of claim 14, see analysis of claim 5.

Regarding claim 20, when read in light of claim 14, see analysis of claim 9.

Regarding claim 21, when read in light of claim 14, see analysis of claim 10.

Regarding claim 22, when read in light of claim 14, see analysis of claim 12.

Regarding claim 25, when read in light of claim 24, see analysis of claim 2.

Regarding claim 26, when read in light of claim 25, see analysis of claim 3.

Regarding claim 32, when read in light of claim 24, see analysis of claim 9.

Regarding claim 33, when read in light of claim 32, see analysis of claim 10.

Regarding claim 34, when read in light of claim 32, see analysis of claim 11.

Regarding claim 35, when read in light of claim 24, see analysis of claim 12.

Regarding claim 37, see analysis of claim 14.

Regarding claim 38, when read in light of claim 37, see analysis of claim 4.

Regarding claim 39, when read in light of claim 37, see analysis of claim 5.

Regarding claim 40, when read in light of claim 37, see analysis of claim 10.

Regarding claim 41, when read in light of claim 37, see analysis of claim 11.

Regarding claim 42, when read in light of claim 37, see analysis of claim

12.

5.   Claims 7-8 and 30-31 rejected under 35 U.S.C. 103(a) as being unpatentable

over Petersen et al (US 5,802,051) in view of Petersen et al (US 5,809,023) and

Mauger et al (US 6,442,147 B1), and further in view of Saito et al (US 5,909,428).

Regarding claim 7, Petersen '051 in view of Petersen '023 and Mauger

teaches the system of claim 1.

Petersen in view of Petersen does not teach the threshold corresponds to

the size of an overhead associated with the inserted second data.

Saito teaches matching cell length with the length of the data to be

inserted (column 1 lines 36-38) reads on limitation "the threshold corresponds to

the size of an overhead associated with the inserted second data". It would have

been obvious to one of ordinary skill at the time the invention was made to

combine Saito's teaching of matching the data length with the cell length with the

ATM cell packing method taught by Petersen in view of Petersen for the benefit

of efficiently using the entire capacity of an ATM cell.

Regarding claim 8, read in light of claim 7 and further in light of claim 1,

Petersen (US 5,802,051) further teaches the overhead includes an indicator

indicative of a placement of the inserted second data among the rest of the

second data (column 2 lines 38-44).

Regarding claim 30, when read in light of claim 24, see analysis of claim

7.

Regarding claim 31, when read in light of claim 30, see analysis of claim

8.

6.   Claims 13 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Petersen et al (US 5,802,051) in view of Petersen et al (US 5,809,023) and

Mauger et al (US 6,442,147 B1), and further in view of Williams (US 5,867,764).

Regarding claim 13, when read in light of claim 1, Petersen '051 in view of

Petersen '023 and Mauger teaches the system of claim 1.

Petersen in view of Petersen does not teach the second data concerns

diagnostics of at least part of the system.

Williams teaches the second data concerns diagnostics of at least part of

the system (column 10 lines 43-48). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to include the

diagnostic data taught by Williams in the data transmission system of Petersen

for the benefit of allowing the headend to anticipate or identify problems in

customer equipment.

Regarding claim 36, when read in light of claim 24, see analysis of claim

13.

7.   Claims 23 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Petersen et al (US 5,802,051) in view of Petersen et al (US 5,809,023), Mauger et

al (US 6,442,147 B1), and White et al (US 6,392,664), and further in view of Williams

(US 5,867,764).

Regarding claim 23, analyzed with respect to claim 14, Petersen in view of

Petersen, Mauger, and White teaches the apparatus of claim 14. Petersen in

view of Petersen and White does not teach the second data concerns

diagnostics of at least part of the apparatus.

Williams teaches the second data concerns diagnostics of at least part of

the apparatus (column 10 lines 43-48). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to include the

diagnostic data taught by Williams in the data transmission system of Petersen

for the benefit of allowing the headend to anticipate or identify problems in

customer equipment.

Regarding claim 43, when read in light of claim 37, see analysis of claim 13.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASMINE STOKELY-COLLINS whose telephone number is (571) 270-3459. The examiner can normally be reached on M-Th 9:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on (571) 272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jasmine Stokely-Collins/
Examiner, Art Unit 2623

/Andrew Y Koenig/
Supervisory Patent Examiner, Art Unit 2623